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BOROUGH OF WIDNES



Annual Report

of the

MEDICAL OFFICER OF HEALTH

for **1947**

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

1947

TO THE CHAIRMEN AND MEMBERS OF THE HEALTH AND
THE MATERNITY AND CHILD WELFARE COMMITTEES

Ladies and Gentlemen,

I have the honour to present to you the annual report on the health of Widnes for 1947, which is compiled from the records of the late Dr. A. Jones. I would like to take this opportunity of recording my appreciation of the work done by Dr. Jones during his period as Medical Officer of Health to the Borough.

Dr. Jones had seen many changes in Public Health, and he himself had made his own original contributions. It only remains for me to comment on some of the features of the report.

1. The birth rate increased from 25.5 per thousand in 1946, to 27.1 per thousand in 1947.
2. The death rate showed a slight increase from 11.3 per thousand in 1946 to 12.1 per thousand in 1947.
3. The infant mortality rate increased slightly from 71 in 1946 to 74 in 1947, but I am happy to report that the maternity mortality rate fell from 1.68 to nil in 1947.

The total number of infectious diseases notified was in excess of the previous year, but this was due to the epidemic of measles, 1,111 cases being notified in the Borough, but there was a reduction in the incidence of all other acute infectious diseases.

The incidence of diphtheria was the lowest on record, and is, without doubt, the direct result of the immunisation of such a high percentage of the child population.

I am,

Your obedient Servant,

F. W. BUNTING,

Medical Officer of Health,

GENERAL STATISTICS

Area of Borough in acres	...	...	...	...	...	6,178
Population at Census, 1931	...	...	...	...	...	40,619
„ Estimated 1947	...	...	...	...	...	46,110
Density of Population (i.e., No of persons per acre)	...	...	...	...	...	7.5
No. of Inhabited Houses (1931 Census)	...	...	...	...	...	8,641
Rateable Value	...	...	...	...	...	£266,663
Sum represented by 1d. Rate	...	...	...	...	...	£886

EXTRACTS FROM VITAL STATISTICS OF THE YEAR

Number of Births: Males 638, Females 616	...	...	...	...	1,254
Birth-rate per 1,000 of the Population	...	...	...	...	27.1
Number of Deaths: Males 315, Females 243	...	...	...	...	558
Death-rate per 1,000 of the Population	...	...	...	...	12.1
Excess of Births over Deaths	...	...	...	...	696
Number of Deaths of Infants (under the age of one year)	...	...	...	...	93
Infantile Mortality per 1,000 Births	...	...	...	...	74.2
Deaths from Influenza	...	...	...	...	2
Death-rate from Influenza per 1,000 of the Population	...	...	...	...	.04
Death-rate from Cancer	...	...	...	...	1.75
Death-rate from Phthisis	...	...	...	...	0.71
Maternal Mortality Rate per 1,000 Births	...	...	...	...	—
Number of women dying in consequence of child birth—	...	...	...	...
From Sepsis	...	...	...	...	—
Other Causes	...	...	...	...	—
Deaths from Measles (all ages)	...	...	...	...	2
„ „ Whooping Cough (all ages)	...	...	...	...	—
„ „ Diarrhoea (under 2 years of age)	...	...	...	...	22
Percentage of total Deaths occurring in Public Institutions	...	...	...	...	43.9

ANALYSIS OF VITAL STATISTICS

POPULATION—

The population returns since 1861 are given below :—

Year	Population	Inhabited houses	Average per house
1861	6,893	1,150	5.99
1871	14,359	2,519	5.66
1881	24,918	4,994	5.0
1891	30,011	5,121	5.86
1901	28,580	5,350	5.34
1911	31,544	6,102	5.16
1921	38,879	7,437	5.22
1931	40,619	8,534	4.63

The Registrar-General's estimate of the population for the year 1947 was 46,110. There is, therefore, an increase of 1,220 over the estimated population for 1946.

BIRTHS—

	Total	Males	Females	
Legitimate	1,254	638	616	} Birth Rate (R.G.) 27.1
Illegitimate	60	26	34	
Birth-rate for England and Wales	...	...	...	20.5

ILLEGITIMATE BIRTHS—

The percentage of births, which were illegitimate, during each of the past 14 years is as follows :—

1934 3.0 per cent.	1941 4.1 per cent.
1935 2.9 per cent.	1942 5.2 per cent.
1936 2.5 per cent.	1943 6.0 per cent.
1937 3.1 per cent.	1944 5.6 per cent.
1938 2.4 per cent.	1945 9.8 per cent.
1939 2.4 per cent.	1946 7.0 per cent.
1940 4.7 per cent.	1947 4.7 per cent.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1947—

CAUSES OF DEATH	All Ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards
Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—
Poliomyelitis	1	1	—	—	—	—	—	—	—
Measles	2	1	1	—	—	—	—	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	—	—	—
Influenza	2	—	—	—	—	1	—	1	—
Encephalitis	1	—	—	—	—	—	—	—	1
Cerebro-Spinal Fever	—	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis ...	33	—	—	1	—	11	12	8	1
Other Tuberculosis diseases	5	—	—	2	2	1	—	—	—
Syphilis	4	3	—	—	—	—	—	—	1
Cancer, malignant disease	81	—	—	—	—	—	7	34	40
Diabetes	7	—	—	—	—	—	—	2	5
Cerebral Haemorrhage, etc.	36	—	—	—	—	—	1	7	28
Heart Disease	130	—	—	—	1	5	5	37	82
Other Circulatory diseases	18	—	—	—	—	—	—	4	14
Bronchitis	44	1	—	—	—	—	3	19	21
Pneumonia (all forms) ...	34	12	1	—	—	—	3	9	9
Other Respiratory diseases	4	1	—	—	—	—	—	2	1
Peptic Ulcer	3	—	—	—	—	—	1	1	1
Diarrhoea, etc., under 2 yrs.	22	22	—	—	—	—	—	—	—
Appendicitis	1	—	—	—	1	—	—	—	—
Other Digestive diseases ...	11	1	—	—	1	1	—	4	4
Acute and Chronic Nephritis	6	—	—	1	—	—	1	—	4
Puerperal Sepsis	—	—	—	—	—	—	—	—	—
Other Puerperal causes ...	—	—	—	—	—	—	—	—	—
Congenital Debility, Premature Birth, Malformations, etc.	47	47	—	—	—	—	—	—	—
Suicide	1	—	—	—	—	—	1	—	—
Road Traffic Accidents ...	2	—	—	1	—	—	—	—	1
Other violence	12	1	1	—	2	1	2	2	3
All other causes	51	3	—	—	4	—	3	3	38
TOTALS	558	93	3	5	11	20	39	133	254

The following is a summary of the deaths of persons belonging to Widnes, which occurred in institutions during the year 1947:—

Widnes Accident Hospital	...	...	...	1
„ Isolation Hospital	...	...	...	—
„ Maternity Home (Infants—1)	...	...	...	—
Liverpool Northern Hospital	...	...	...	—
„ Children's Infirmary (Infants—0)	...	...	...	4
„ Royal Infirmary	...	...	...	1
„ Southern Hospital	...	...	...	2
„ Public Assistance Hospitals	...	...	...	—
„ Maternity Hospital (Infants—1)	...	...	...	1
„ Babies Hospital (Infants—2)	...	...	...	3
„ Cancer Hospital	...	...	...	1
„ Women's Hospital	...	...	...	—
„ St. Vincent's Hospital	...	...	...	1
County Mental	...	...	...	7
„ Sanatoria	...	...	...	10
Warrington Infirmary	...	...	...	—
Other Hospitals	...	...	...	11
Whiston Infirmary (Infants 45)	...	...	...	158
„ Institution	...	...	...	45
TOTAL	...	...	...	245

The following table summarises the Vital Statistics of the Borough :—

	Per 1,000 of Population			Per 1,000 Births		
	Birth Rate	Death Rate	Death Rate from Tuberculosis of Respiratory System	Death Rate from Cancer	Maternal Rate of Mortality	Rate of Deaths under 1 year
Mean of 5 years—						
1942-1946	22.5	11.8	0.64	1.77	1.85	69
Year—						
1947	27.1	12.1	0.71	1.75	—	74
1946	25.5	11.3	0.49	1.47	1.68	71
Increase or Decrease in 1947 on Five Years'						
Average	+4.6	+.03	+0.07	−0.02	−1.85	+5
1942-1946						
Previous year	+1.6	+0.8	+0.22	+0.28	−1.68	+3

The general death rate was 12.1 per thousand, as compared with 11.8 for the preceding five-year period. The death rate for England and Wales was 12.

The following table gives the general death rates in the various Wards during the past 25 years.

YEARS	Farn- worth	Hal- ton	Simm's Cross	Vic- toria	Water- loo	West Bank	Dit- ton	Whole Bor- ough
1922-1926 ...	10.2	12.1	12.0	15.2	15.8	13.0	13.4	13.3
1927-1931 ...	10.1	12.9	11.3	14.6	16.7	11.5	10.3	12.6
1932-1936 ...	10.5	11.6	11.5	12.8	15.7	12.6	11.5	12.0
1937-1941 ...	11.2	13.0	12.2	14.3	16.3	13.5	13.9	13.1
1942-1946 ...	11.5	11.5	10.7	13.3	12.0	12.7	13.2	11.9
1922-1946 ...	10.7	12.2	11.5	14.0	15.5	12.6	12.5	12.6

INFANTILE MORTALITY

The causes of Deaths of Infants during 1947 are recorded in the following table :—

CAUSE OF DEATH	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 Weeks	4 Weeks and under 3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under 1 Year
Whooping Cough	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	1	—	1
Syphilis	1	—	—	—	1	1	1	—	—	3
Influenza	—	—	—	—	—	—	—	—	—	—
Bronchitis	—	—	—	—	—	1	—	—	1	2
Pneumonia (all forms) ...	1	1	1	—	3	3	3	3	—	12
Tuberculosis	—	—	—	—	—	—	—	—	—	—
Enteritis and Diarrhoea	—	2	6	2	10	6	5	1	—	22
Digestive Diseases	—	1	—	—	1	—	—	—	—	1
Other Congenital Causes	12	3	2	1	18	2	1	1	—	22
Premature Birth	16	4	2	2	24	1	—	—	—	25
Violence	—	—	—	—	—	—	1	—	—	1
Other Causes	1	—	1	1	3	—	—	1	—	4
TOTALS	31	11	12	6	60	12	12	7	2	93

The following table gives the Infant Mortality per 1,000 Births in the Wards of the Borough :—

YEARS	Farn- worth	Hal- ton	Simm's Cross	Vic- toria	Water loo	West Bank	Dit- ton	Bor- rough
1922-1926	50	90	77	92	115	98	82	85
1927-1931	45	82	74	84	90	76	62	74
1932-1936	55	66	67	91	105	68	56	72
1937-1941	58	87	80	98	105	91	81	84
1942-1946	50	78	56	83	80	103	69	70
1922-1946	52	80	70	90	100	87	70	77

It will be seen from the Tables that the number of deaths of children under 1 year of age was 93, which represents an Infantile Mortality rate of 74 per 1,000 births as compared with the rate of 69 for the preceding five-year period. The Infantile Mortality rate for England and Wales was 41 per 1,000 births.

It has always been emphasised that statistics relating solely to one year for a town of the size of Widnes should not be used for purposes of comparison. A period covering at least five years is the minimum from which any deductions can be made. The following Table will, therefore, afford a useful basis for comparison :—

ANALYSIS OF CAUSES OF INFANTILE MORTALITY IN SUCCESSIVE QUINQUENNIA 1907-1946

Death Rates per 1,000 Births

Years	Total deaths under 1 yr. of age	Infec- tious dis- eases (ex- clu- ding T.B.)	Tuber- cular dis- eases	Ner- vous dis- eases	Res- pir- atory dis- eases	Digestive diseases (including Diarr- hoea)	Malfor- mations Prema- ture Births, Maras- mus etc.	Other causes
1907-1911 ...	142	7.9	3.7	14.2	19.3	45.6	46.8	4.7
1912-1916 ...	125	11.6	1.4	12.8	24.0	26.1	43.5	5.6
1917-1921 ...	103	9.2	0.2	8.2	17.0	23.2	40.3	5.5
1922-1926 ...	85	8.8	0.2	7.5	19.0	13.0	30.7	5.9
1927-1931 ...	74	5.7	0.45	3.6	18.7	7.3	33.5	4.1
1932-1936 ...	72	3.1	0.95	6.0	12.7	6.2	38.0	4.5
1937-1941 ...	84	4.7	1.1	2.12	17.1	11.1	42.6	4.9
1942-1946 ...	70	3.7	0.2	2.5	12.4	16.6	30.4	3.1

The chief points which the Tables illustrate may be summarised as follows :—

1. The Infantile Mortality rate steadily declined until the end of 1936 when it rapidly rose. It has, however, declined during the last five-year period.
2. The Infantile Mortality rate has, generally speaking, been satisfactory in the Farnworth Ward during the past 25 years.
3. The chief causes of Infantile Mortality are prematurity, and other congenital conditions, the majority of such deaths occurring during the first week of life.
4. The mortality from digestive diseases declined rapidly until 1936 since when there has been a steady increase.

The weight of every child at birth is reported on the notification card and infants weighing 5½ lbs. or less are regarded as being prematurely born. The figures for the past two years are as follows:—

PLACE OF BIRTH	Percentage of Premature Infants		Percentage of Premature Infants which died	
	1947	1946	1947	1946
Home	5.9	5	37.5	30
Maternity Home	12.5	8	—	21
County Hospital, Whiston	12.1	11	56.1	65
Other Hospitals	14.8	10	25	100

During the year 1947, 8.8% of the total births were premature as compared with 7% during 1946. It is realised that prematurity is due to conditions occurring prior to birth and, with a view to its prevention, two ante-natal sessions were instituted during 1946, and the closest co-operation is maintained with the staff of the County Hospital. Time will prove whether this increased ante-natal supervision will produce a reduction in the percentage of premature births. Unfortunately, many women are still unwilling to avail themselves of the facilities afforded by the Ante-Natal Clinic.

The figures again show that the mortality rate among premature infants is greater in the case of those born in hospital. This is largely due to the fact that the hospital staffs are inadequate to give the time which is necessary in endeavouring to save the lives of such infants. Hot-water bottles and other necessities are issued to midwives for the use of premature babies born at home; such infants are very frequently visited and the help of relatives is secured.

It will be seen from the Table which summarises the causes of Infantile Mortality that gastro-enteritis was responsible for the death of a large number of infants during the years 1905 to 1919. A substantial reduction in the mortality from this disease after that period resulted from the abolition of the privy midden system and the general improvement in outdoor sanitation. The increase in the number of deaths during recent years from gastro-enteritis is very discouraging. This disease invariably occurs in infants who are artificially fed and there is no doubt that during the past ten years there has been a marked reduction in the percentage of breast-fed infants. Breast feeding not only provides better digestion and nutrition but gives almost perfect protection against infection. Many infants are bottle fed solely on the grounds of convenience. Every effort is made to encourage the practice of breast feeding, particularly in homes where housing conditions and domestic hygiene multiply the risks of infection. There is no doubt that the standard of domestic hygiene in many homes is low.

In order to provide the best treatment for infants suffering from this and other diseases, the County Authority appointed a pediatrician to the staff of the County Hospital.

The deaths under 2 years of age from diarrhoea and enteritis were 22 as compared with 25 in 1943.

PROFESSIONAL NURSING IN THE HOME—

The arrangements made with the Widnes Queen's Nursing Association for the home nursing of children suffering from measles and whooping-cough have operated normally.

MIDWIFERY—

The number of midwives practising in the area was 9.

HOME HELPS—

A Home Help Scheme was put into operation in January, 1946. The scheme provides domestic assistance in the homes of women during their confinement and is available to all who make application irrespective of the financial circumstances of the applicant. Five home helps are on the register. All applications for assistance have been met and the number of cases dealt with during the year was 63.

DOMESTIC HELPS—

The Domestic Help Scheme which commenced in February, 1945, provides domestic assistance in the homes of people who are sick or infirm, whether through old age or otherwise. The helps are employed by the Local Authority and all applications for the services of a Domestic Help are made to the Health Department. Part-time or full-time help is allotted according to the needs of the household. Since the inception of the scheme, 109 cases have received assistance. The number of domestic helps on the register at the end of the year was 20.

*LABORATORY FACILITIES—**Bacteriological Examinations —*

The number of specimens examined in 1947 was:—

Nasal swabs ...	28	Others ...	2
Throat swabs ...	140		

The number of Bacteriological Examinations carried out in 1946 was 276.

HOSPITALS—

(a) The number of patients admitted to the Isolation Hospital during 1947 was 117 as compared with 219 during 1946. Five of the patients were admitted from the Whiston Rural District. The cases admitted during the year consisted of 79 cases of Scarlet Fever, 4 cases of Diphtheria, 8 cases of Measles, 17 cases of suspected Diphtheria, and 4 Diphtheria carriers.

(b) A summary of the cases treated at the Accident Hospital during 1947 was:—

Admitted during 1947 ...	105
Out-Patients, during 1947 ...	2,382
Re-visits, Out-Patients during 1947 ...	13,045
Operations ...	111
X-Ray Examinations ...	1,534
Deaths ...	1

The cases treated in 1946 were: Admissions 145; out-patients 2,150; and operations 150.

MATERNITY HOME—

The total number of cases admitted to the Home during the year was 319 as compared with 302 during 1946.

AMBULANCE FACILITIES—

The Local Authority has provided one motor ambulance for the removal of cases of infectious disease to hospital, two for the removal of patients to hospitals within or without the Borough and one for emergencies. The three latter ambulances are stationed at the Health Centre during the day and all enquiries for an ambulance are dealt with by a member of the staff. In order to simplify the procedure for obtaining an ambulance after office hours, an ambulance depot was established on the first floor of the Mill Brow Clinic, where all enquiries for an ambulance are dealt with by one of the ambulance drivers. A card setting out the details for obtaining an ambulance was issued to the Police, works, shops, schools, hospitals, doctors and midwives, etc., in the Borough.

The amount of work carried out by the ambulance department during the day-time is such that three drivers are required to be on duty. Experience has shown that the majority of emergency calls occur in the day-time, and, in addition, a large number of patients who are unable to walk or travel by bus are conveyed to and from the out-patient departments of the various Liverpool hospitals, the Whiston County Hospital and the Widnes Accident Hospital. In 1947 the number of journeys made to hospitals both in and out of the Borough was 1,155 during office hours as compared with 121 during the evening, night and week-end. The total mileage during the year was 26,285 as compared with 17,983 during 1946.

CLINICS AND TREATMENT CENTRES—

The Child Welfare and School Clinics functioned normally during the year.

The record of home visits paid by the health visitors during the year was :—

to Expectant Mothers:	First Visits	339	Total Visits	655
Infants under 1:	„ „	1,248	„ „	5,371
Children 1-5:	„ „	—	„ „	4,968

An Ante-Natal Clinic is conducted by Mr. P. Malpas every Tuesday and Friday afternoons. The specialist voluntarily conducts an ante-natal clinic at the Maternity Home immediately he has finished his sessions at the Health Centre. The number of ante-natal cases which attended the clinics was 1,180, as compared with 1,155 during 1946, and 836 during 1945. The total attendances during the year were 3,612 as compared with 3,765 during 1946.

It was found necessary to arrange for 19 cases to be admitted to the Liverpool Maternity Hospital during the year. because of disabilities or defects discovered at the clinic. The number of cases admitted during 1946 was 11. In addition 344 cases were admitted to the Whiston County Hospital, as compared with 329 during 1946 and 230 during 1945. It will be seen, therefore, that the County Hospital is being extensively used for maternity cases. Since the year 1937, when the number was 24, there has been an annual increase in the number of cases admitted. During the year 1947, 54% of the total births occurred in institutions, as compared with 48% during 1946.

From its inception the work at the clinic has not been confined to ante-natal supervision. Patients suffering from disabilities which are the result of childbirth, or from other diseases peculiar to women, are examined, and where necessary are admitted either to the Women's Hospital, Liverpool, or to the County Hospital for operative treatment. 170 such cases were

examined during the year 1947. The services of the specialist are also at the disposal of the medical practitioners for cases of difficult labour and puerperal disorders, and full advantage is taken of this provision.

A scheme for the examination and treatment of crippled children was put into operation in January, 1926. The Orthopaedic surgeon visits Widnes fortnightly to direct the necessary treatment. Children requiring operative treatment are admitted to the Children's Infirmary at Liverpool, the country hospital at Heswall, or the Widnes Accident Hospital.

TUBERCULOSIS DISPENSARY—Chapel Street—

This is provided by the County Authority, and the Tuberculosis Officer attends on Monday mornings, and Friday afternoons.

The Mass Radiography Unit possessed by the County Authority was only available for a limited number of Widnes residents during 1945. Several Units with the requisite trained staff will be needed for use in the Administrative County if a satisfactory scheme for the early detection of Pulmonary Tuberculosis is to be instituted.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASE

(i) NOTIFIABLE DISEASES DURING THE YEAR—

DISEASE				Total cases notified	Cases admitted to Hospital	Total Deaths
Diphtheria	...	...	...	4	4	—
Scarlet Fever	...	...	...	88	80	—
Dysentery	...	...	...	—	—	—
Puerperal Pyrexia	...	...	...	—	—	—
Malaria	...	...	...	—	—	—
Pneumonia	...	...	...	49	—	34
Erysipelas	...	...	...	7	—	—
Ophthalmia Neonatorum	...	...	...	—	—	—
Enteric Fever	...	...	...	—	—	—
Cerebro-spinal Fever	...	...	...	20	2	—
Measles	...	...	...	1111	8	2
Whooping Cough	...	...	...	20	—	—
Infantile Paralysis	...	...	...	1	1	1
Tuberculosis—						
(a) Pulmonary	...	M	.....	24	—	13
		F	.....	33	—	20
		Total	...	57	—	33
(b) Non-Pulmonary	}	M	.....	9	—	3
		F	.....	12	—	2
		Total	...	21	—	5

(ii) ANALYSIS OF NOTIFIABLE DISEASES IN AGE GROUPS—

DISEASE	Total Cases at all Ages	CASES NOTIFIED											
		Years											
		Under 1	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 65	65 and over	
Diphtheria .	4	—	—	—	—	—	1	1	1	1	—	—	—
Scarlet													
Fever	88	2	5	12	5	7	29	19	3	4	2	—	—
Measles	1,111	67	140	145	199	184	344	20	1	1	—	—	—
Whooping													
Cough	20	5	4	2	6	2	1	—	—	—	—	—	—
Cerebro-Spinal													
Fever	2	1	—	—	1	—	—	—	—	—	—	—	—
Para-typhoid	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia .	49	1	—	2	1	4	12	—	1	9	3	9	7
Erysipelas .	7	—	—	—	1	—	—	—	1	2	1	1	1
Ophthalmia	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal													
Pyrexia	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	1	1	—	—	—	—	—	—	—	—	—	—	—
Pulmonary T.B.													
M.	24	—	—	1	—	—	1	1	4	8	1	7	1
F.	33	—	—	—	—	—	—	1	11	17	2	1	1
Non-Pulmonary													
T.B.													
M.	9	—	—	1	2	—	3	—	2	1	—	—	—
F.	12	1	1	1	—	2	4	—	1	1	1	—	—
TOTALS ...	1,360	78	150	164	215	199	395	42	25	44	10	19	10

OPHTHALMIA NEONATORUM.—

No case of Ophthalmia Neonatorum was notified during 1947.

SCARLET FEVER—

The number of cases of Scarlet Fever notified during the preceding five years was : 1942—261; 1943—463; 1944—241; 1945—289; 1946—240. There were no deaths from this disease during the year.

DIPHTHERIA—

The following Table gives the incidence of this disease during the past 10 years :—

Year	No. of Cases	No. of Deaths	Year	No. of Cases	No. of Deaths
1938	240	6	1943	30	2
1939	180	3	1944	23	0
1940	200	6	1945	14	0
1941	160	9	1946	19	0
1942	95	4	1947	4	0

None of the fatal cases recorded in the above Table had been immunised.

In the comparatively few cases of Diphtheria which occurred among children who had been immunised the disease was of a very mild character. The rare occurrence of the disease and the complete absence of mortality among immunised children should convince every parent as to the value of immunisation. It is of interest to note that during the past four years more than 32% of the cases of Diphtheria occurred among persons over 15 years of age. This disease in former years was almost entirely confined to children under that age.

A scheme providing free immunisation against Diphtheria was put into operation in January, 1941, and the percentage of children immunised between the ages of 1 and 4 years inclusive is 91 and that of children attending school is 98.6. A great deal of effort has been needed to secure such an excellent response. The number of parents who persistently refuse to have their children immunised is very small, but it is a matter for regret that many postpone immunisation until the children are of school age.

The number of children immunised during the past seven years is as follows :—

Date of Birth	1941	1942	1943	1944	1945	1946	1947	Total
1927 to 1932	3029	132	532	8	6	—	1	3708
1933	490	48	170	7	3	3	1	722
1934	506	62	173	5	5	2	3	756
1935	454	99	225	10	5	5	1	799
1936	328	176	238	16	7	7	3	775
1937	270	269	241	13	12	7	2	814
1938	287	316	201	39	18	9	4	874
1939	236	301	169	77	52	13	1	849
1940	107	411	218	80	45	26	4	891
1941	—	367	298	101	39	62	15	882
1942	—	—	393	258	60	46	23	780
1943	—	—	—	437	263	92	29	821
1944	—	—	—	—	575	270	66	911
1945	—	—	—	—	—	473	288	761
1946	—	—	—	—	—	1	835	836
1947	—	—	—	—	—	—	24	24
TOTALS ...	5707	2181	2858	1051	1090	1016	1300	15203

It has been established that when children are immunised at an early age the immunity to some extent diminished as they grow older and parents are advised to consent to their children receiving one further dose of the immunising agent when they attain the age of 5 years. It is confidently anticipated that this re-inforcing dose will create a life-long immunity. The number of children who were re-immunised during 1947 was 914.

TUBERCULOSIS. The number of cases of Tuberculosis and of all deaths from the disease during 1947 will be found in the following table :—

Age Periods	NEW CASES				DEATHS			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
Years								
0-1	—	—	—	1	—	—	—	—
1-5	1	—	3	4	1	—	1	1
5-10	1	—	3	4	—	—	1	1
10-15	1	1	—	—	—	—	—	—
15-20	4	11	2	1	1	6	1	—
20-25	3	6	1	1	1	3	—	—
25-35	5	11	—	—	1	6	—	—
35-45	1	2	—	1	2	3	—	—
45-55	3	1	—	—	2	—	—	—
55-65	4	—	—	—	5	1	—	—
65 - upwards	1	1	—	—	—	1	—	—
TOTALS	24	33	9	12	13	20	3	2
	57		21		33		5	

The following Table gives the incidence of Tuberculosis during the past 30 years :—

Annual Average	Pulmonary Tuberculosis		Non-Pulmonary Tuberculosis	
	Case rate per 1,000 of population	Death rate per 1,000 of population	Case rate per 1,000 of population	Death rate per 1,000 of population
1917/1921 ...	1.84	1.18	1.1	0.27
1922/1926 ...	1.65	0.98	1.3	0.2
1927/1931 ...	1.5	0.93	1.0	0.18
1932/1936 ...	1.02	0.7	0.78	0.22
1937/1941 ...	0.86	0.66	0.55	0.15
1942/1946 ...	0.98	0.64	0.52	0.1

It will be observed that the incidence and the death rates from Pulmonary Tuberculosis steadily declined from 1917 to 1941 and that they have increased since. The latter circumstance has occurred throughout the country and is not surprising. A further diminution cannot be expected until overcrowding is abated and insanitary dwellings are demolished.

It will be seen that the incidence and the death rates from Non-Pulmonary Tuberculosis have also steadily declined. This disease is mainly caused by the consumption of infected milk. The pasteurisation of milk is, therefore, the chief means of prevention. A new pasteurising plant was completed during the year and the bulk of the milk supply in the Borough is now pasteurised. Application was made under Defence Regulation 55G for Widnes to be designated a Specified Area but it was refused. It is, however, hoped that within a reasonable time the whole of the milk supply will be either pasteurised or obtained from T.T. or accredited herds.

The following Table gives the death rates from Pulmonary Tuberculosis in the various wards during the past 25 years :—

Years		Farn- worth	Hal- ton	Simms Cross	Vic- toria	Water- loo	West Bank	Dit- ton
1922-1926	.....	0.7	0.6	1.0	1.2	1.4	0.7	0.8
1927-1931	.....	0.3	0.8	1.1	1.2	1.6	1.0	0.6
1932-1936	.....	0.5	0.4	0.8	1.1	1.1	0.6	0.6
1937-1941	.....	0.4	0.6	0.6	0.9	0.8	0.9	0.6
1942-1946	.....	0.5	0.4	0.5	1.0	0.7	0.9	0.5
1922-1946	.....	0.48	0.56	0.8	1.08	1.12	0.82	0.62

SANITARY CIRCUMSTANCES OF THE AREA WATER SUPPLY—

The water supply of the Borough is obtained by pumping from deep wells in the sandstone. Three samples were analysed by the Public Analyst and 4 by the Bacteriologist to the City of Liverpool, and were found to be of excellent quality. The chlorination of water supplies was commenced in November, 1941.

CLOSET ACCOMMODATION—

There are 97 privy middens, but they are situated in the rural parts of the Borough and cannot be converted owing to the absence of adequate sewers. There are only three waste water closets in existence, and it is calculated that 11,807 houses are provided with fresh water closets.

REFUSE REMOVAL—

This work is carried out entirely by the Highways Committee, and motor transport is mainly used. There are 44 dry ashpits

and 97 ashpits attached to privies. The remaining houses in the Borough are provided with portable bins, and during the year, as a result of the easing of manufacturing facilities, it has been possible to secure adequate supplies to replace defective ashbins.

SANITARY INSPECTION OF THE DISTRICT—

A record of the work of the Sanitary Department is as follows:—

Defects or Nuisance: No. Discovered ...	3,428
No. Abated	2,954
No. of Notices served: Informal	1,874
Statutory	484
No. of Legal Proceedings taken	88
No. of Premises visited	7,356

Premises kept under observation	Number of Premises	Number of Inspections
Factories, sanitary accommodation	130	173
Bakehouses	18	221
Slaughterhouses	—	—
Milkshops	62	252
Food Premises	82	396
Ice Cream Premises	8	64
Cowsheds	21	73
Common Lodginghouses	5	184
Tents and Caravans	12	58
Visits to premises where cases of Infectious diseases have occurred	120	120
No. of premises disinfected after cases of Infectious Diseases ...	103	—
No. of articles disinfected by steam disinfector	3,795	—

SMOKE ABATEMENT—

Every effort has been made to secure a reduction of atmospheric pollution due to the emission of black smoke from factories in the Borough. During the year, 153 recorded observa-

tions were made, each for a period of half an hour. On 58 occasions (38%) the emissions were excessive; this shows an improvement on the conditions prevailing in 1946, when 167 observations were made and in 74 instances (44%) the emissions were excessive. A consultative committee was formed in February with a view to the prevention of atmospheric pollution. The discussions which took place at the various Committee meetings have clearly demonstrated the value of co-operation between the Local Authority and industry generally, inasmuch as there has been a decided effort on the part of industrial concerns to reduce smoke emission to a minimum, to improve internal equipment, and to promote greater efficiency among boiler staffs.

One complaint of grit emission was remedied following the Smoke Inspector's interview with the management concerned.

The Local Authority is a co-operating body with the Department of Scientific and Industrial Research for the purpose of investigating the extent of atmospheric pollution. Three stations were established at the I.C.I. Recreation Grounds, the Health Centre and the Isolation Hospital for estimating the amount of sulphur dioxide by the lead-peroxide method. At these stations standard deposit gauges have been fixed for the collection of rainwater with a view to assessing the deposits in tons per square mile. A return is made each month on the analyses from these station gauges.

ERADICATION OF BED BUGS—

30 houses belonging to the Corporation and 39 private dwellings were treated during the year because of verminous infestation. The work was carried out by an employee of the Local Authority and various insecticides, including DDT and Gammexane, were used. The latter substances have proved to be very efficient. In addition, householders were encouraged to carry out disinfestation and were freely supplied with suitable spraying insecticides, sulphur candles and Gammexane, the operations having good results.

RODENT CONTROL—

Three whole-time rodent operatives are employed by the Local Authority, and a summary of the work carried out during the period is appended:

Premises		Number treated	Bait applied (lbs.)	Poison Bait Applied (lbs.)	Estimated Destruc- tion	Bodies found
Public Sewers	...	2317	1413	226	2278	99
Dwellinghouses	...	132	211	50	448	101
Other Premises	...	44	282	58	667	176

INSPECTION AND SUPERVISION OF FOOD

(a) MILK SUPPLY—

The number of dairymen, other than cow-keepers, on the register is 33. One dealer's licence for the bottling of T.T. milk, one for the distribution of T.T. milk and three for the distribution of Pasteurised milk were issued. There are 22 dairy farms in the Borough. Mr. P. T. Lindsay, veterinary officer to the Ministry of Agriculture, carried out the inspection of the cows.

Forty-eight samples of Pasteurised milk were submitted to the Liverpool City Bacteriologist for examination, six being found to be unsatisfactory under the Methylene Blue Test, while one, when applied to the Phosphatase Test, was found not to be sufficiently heat treated. All the unsatisfactory samples came from an outside pasteurising plant, and enquiries revealed that the causes were mainly due to technical faults. Six samples of raw milk were bacteriologically examined and found to be up to standard requirements. Three samples of T.T. milk were examined for tubercle bacillus, but were found to be negative.

(b) ICE CREAM—

During the year, and particularly during the peak seasonal trading period, the manufacture and sale of ice cream in the Borough were closely investigated.

Following representations in 1946, the largest manufacturer, who employs the hot mix, was able to obtain and instal modern cooling apparatus at his factory. This enabled him to discontinue the old unsatisfactory method of exposing the mixture to the atmosphere for several hours before freezing, and thus removed the danger of contamination.

Some difficulty was experienced at the same factory in arranging for block ice cream to be wrapped without undue handling by the employees. The Department supervised certain experiments following which the dealer adopted measures which have since proved efficacious.

Sixty-two samples of ice cream and ingredients, taken from local dealers, were submitted to an independent bacteriologist at Warrington, for examination under (1) the Methylene Blue test as prescribed by the Ministry of Health; and (2) for evidence, if any, of contamination by organisms of faecal coli. Under the first test, the samples submitted were classified as follows: Grade 1—3; Grade 2—22; Grade 3—22; and Grade 4—15.

Subission to the second test resulted in eleven samples being found to contain intestinal organisms and adjudged to be unsatisfactory. The majority of these came from the larger factory, but, with the adoption of safer wrapping methods, later results showed a steady improvement in the quality of ice cream produced for public sale.

FOOD PREPARATION—

The Sanitary Inspectors, who are responsible for the inspection and supervision of food, paid 396 visits to premises where food is prepared for sale. In four instances the existing conditions did not conform to the requirements of Section 13 of the Food and Drugs Act, 1938, and it was found necessary to serve the appropriate notices. These were promptly complied with. In a few instances, local butchers complained of the dirty condition of animal carcasses received from the Stanley Market, and the circumstances were reported to the Liverpool Meat Transport Organisation. Transport conditions improved, but the Inspectors continued to supervise regularly the delivery of meat to the shops in the Borough on regulation days.

Some concern was caused at the Barrows Green Cooking Depot by confectionery and puddings being discoloured during preparation, and at the request of the Depot Officer samples of small cakes, semolina and steam puddings, lemon essence, and a baking tray were submitted to the Liverpool City Analyst for examination. The Analyst reported that the tray was much worn, and the staining of the foodstuffs was due to the action of the mixtures on the exposed iron in the tray forming traces of dark coloured iron compounds in the finished products. The Cooking Depot official was informed, and steps were taken to dispense with all worn trays.

(c) MEAT—

The amount of meat condemned as unfit for human consumption comprised: Beef, 228lbs; Bacon, 6lbs; Tinned meat, 170lbs; Roast beef, 10lbs.

(d) OTHER FOODSTUFFS—

Other foodstuffs condemned comprised: Fish, 63 tins; vegetables, 294 tins; wet fish, 146lbs.; milk, 558 tins; jam, 21 tins; marmalade, 29 tins; fruit, 911 tins; soup, 30 tins; M. & V. rations, 45 tins; Irish stew, 20 tins; pickles, 6 jars; honey, 1 jar; mince meat, 2 tins; spaghetti, 8 tins; macaroni, 2 tins; meat paste, 3 jars; dried eggs, 10 tins; treacle, 1 tin; fruit cocktail, 1 tin; syrup, 1 tin; kippers, 72lbs.; dates, 14 packets; sweets, 19½lbs.; tea, 123½lbs.; flour, 121½lbs.; pears, 600lbs.; cheese, 66lbs.; processed cheese, 26 boxes; sugar, 66lbs.; pineapples, 6 dozen; biscuits, 5lbs.; oats, 15lbs.; eggs, 600; fruitella table dessert with sauce, 252 1-lb. packets; Lemon cheese, 1 jar; margarine, 22lbs. 2 ozs.; confectionery, 1 large fig tart.

The following samples were examined by the Liverpool City Analyst:—

Milk (raw)	...	...	44	Confectionery, etc.	...	4
T.T. milk	...	...	1	Food utensil	...	1
Sterilised milk	...	...	2			

Four samples of raw milk were found not to be of legal standard, the City Analyst reporting the presence of added water. Legal action was taken and three cases were dismissed on payment of costs, while the Local Justices imposed a fine in the fourth instance.

HOUSING

Number of New Houses erected during the year—

Total	166
(i) By the local authority — Temporary 14, Permanent 115	129
(ii) By other bodies or persons	37

Inspection of Dwellinghouses during the year—

1. (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	2,055
(b) Number of inspections made for the purpose	4,865
2. (a) Number of dwelling-houses (included under sub-head 1 above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 and 1932	463
(b) Number of inspections made for the purpose	492
3. Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	34
4. Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	215

Remedy of Defects during the year without Service of Formal Notice—

Number of defective dwelling-houses rendered fit in consequence of informal action by the local authority or their officers	1,197
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Action under Statutory Powers during the year—

(a) Proceedings under Public Health Acts :	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	1,874

(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—

(a) By owners	... ..	309
(b) By local authority in default of owners		Nil

(b) Proceedings under Sections 11 and 13 of the Housing Act, 1936 :—

(1) Number of dwelling-houses in respect of which Demolition Orders were made	15
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(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	Nil
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(c) Proceedings under Section 12 of the Housing Act, 1936 :—

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	Nil
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Housing Act, 1936—Part IV—Overcrowding—

(a) Number of new cases of overcrowding reported during the year	102
(b) (i) Number of cases of overcrowding relieved during the year	... ..	95
(ii) Number of persons concerned in such cases		463

FACTORIES ACT, 1937

1. INSPECTIONS

Premises (1)	M/c line No. (2)	Number on Register (3)	Number of			M/c line No. (7)
			Inspections (4)	Written Notices (5)	Occupiers Prosecuted (6)	
(1) Factories in which Sections 1, 2, 3, 4 and 6 are to be en- forced by Local Authorities	1	78	102	16	—	1
(2) Factories not included in (1) to which Section 7 applies :						
(a) Subject to the Local Authorities (Transfer of Enforcement) Order, 1938	2	52	71	11	—	2
(b) Others	3	—	—	—	—	3
(3) Other Premises under the Act (excluding out-workers' premises)	4	—	—	—	—	4
TOTAL	—	130	173	26	—	—

2. CASES IN WHICH DEFECTS WERE FOUND

Particulars (1)	M/c line No. (2)	Number of cases in which defects were found				Number of cases in which prosecutions were instituted (7)	M/c line No. (8)
		Found (3)	Remedied (4)	To H.M. Inspector (5)	Referred By H.M. Inspector (6)		
Want of cleanliness (S.1) ...	5	8	8	—	—	—	5
Overcrowding (S.2) ...	6	—	—	—	—	—	6
Unreasonable temperature (S.3)	7	—	—	—	—	—	7
Inadequate ventilation (S.4) ...	8	—	—	—	—	—	8
Ineffective drainage of floors (S.6.) ...	9	3	3	—	—	—	9
Sanitary Conveniences (S.7) :							
(a) insufficient ...	10	3	3	—	3	—	10
(b) unsuitable or defective	11	12	12	—	—	—	11
(c) not separate for sexes ...	12	1	1	—	1	—	12
Other offences (not including offences relating to Home- work) ...	13	—	—	—	—	—	13
TOTAL ...	60	27	27	—	4	—	60

